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Checklist of earthworms (Oligochaeta: Lumbricidae) from Bulgaria—a review

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Abstract

Little is known about the diversity, ecology, distribution and habitats of earthworm populations in Bulgaria. In the present study an attempt has been made to collect all scientific works on earthworm species (Lumbricidae) of Bulgaria. The complete list of earthworm taxa of Bulgaria comprises 50 species and subspecies of Lumbricidae, belonging to 15 genera. For the first time, comprehensive information on distribution and habitats of all lumbricids in the country is given. The paper is useful for further monitoring studies of earthworm diversity and abundance in relation to environmental issues, land use and climate change.

Key words: Annelida, Clitellata, distribution, ecology, habitat

Introduction

Numerous scientists have published data on the earthworm fauna of Bulgaria and their distribution. Investigations of the earthworm fauna date from more than 100 years. The first study on earthworms in Bulgaria was published 1897 by D. Rosa. Since then many scientists (Černosvitov L., Plisko G., Zicsi A., Csuzdi C., and Mihailova P.) worked in this direction, but data have remained scarce. In this study we have made an attempt to collect all available information on Bulgarian earthworm species.

Bulgaria is situated in South-eastern Europe on the Balkan Peninsula. The relief is extremely varied in its comparatively small territory. The climate in Northern Bulgaria is moderately continental, while the climate in Southern Bulgaria is intermediate-continental, tending to Mediterranean climate. In the regions with an altitude of 2000 meters a.s.l. climate is alpine. The species of Lumbricidae recorded in Bulgaria belong to different zoogeographic regions: Trans-Aegean (6 taxa), Balkan and Larger endemics (5 taxa), Holarctic (4 taxa), Central European (4 taxa), Mediterranean (2 taxa), Balkanic-Alpine (2 taxa), Moesian (1 taxon) and Palearctic (1 taxon). Fourteen species are peregrines, and six species are endemic for the country: *Helodrilus duhlinkae* Zicsi & Csuzdi, 1986, *Cernosvitovia bulgarica* (Černosvitov, 1934), *Serbiona tuleshkovi* (Černosvitov, 1937), *Eisenia grandis storkani* Černosvitov, 1934, *Dendrobaena balcanica* (Černosvitov, 1937) and *Dendrobaena hrabei* (Černosvitov, 1934).

In the catalogue all known species of Bulgarian lumbricids are recorded. Fifty species and subspecies have been found living freely in soils, and these are considered to be the natural earthworm fauna. Doubtful records--possibly misidentifications--include the Dacian and Carpathian endemics *Octodrilus frivaldszkyi* (Örley, 1885), *Octodrilus exacystis* (Rosa, 1896), *Octodrilus gradinescui* (Pop, 1938) and *Allolobophora carpathica* (Cognetti, 1927), further the Greek endemic *Aporrectodea jassyensis phoebea* (Cognetti, 1913).

Catalogue of earthworms in Bulgaria

Class Oligochaeta

Family Lumbricidae